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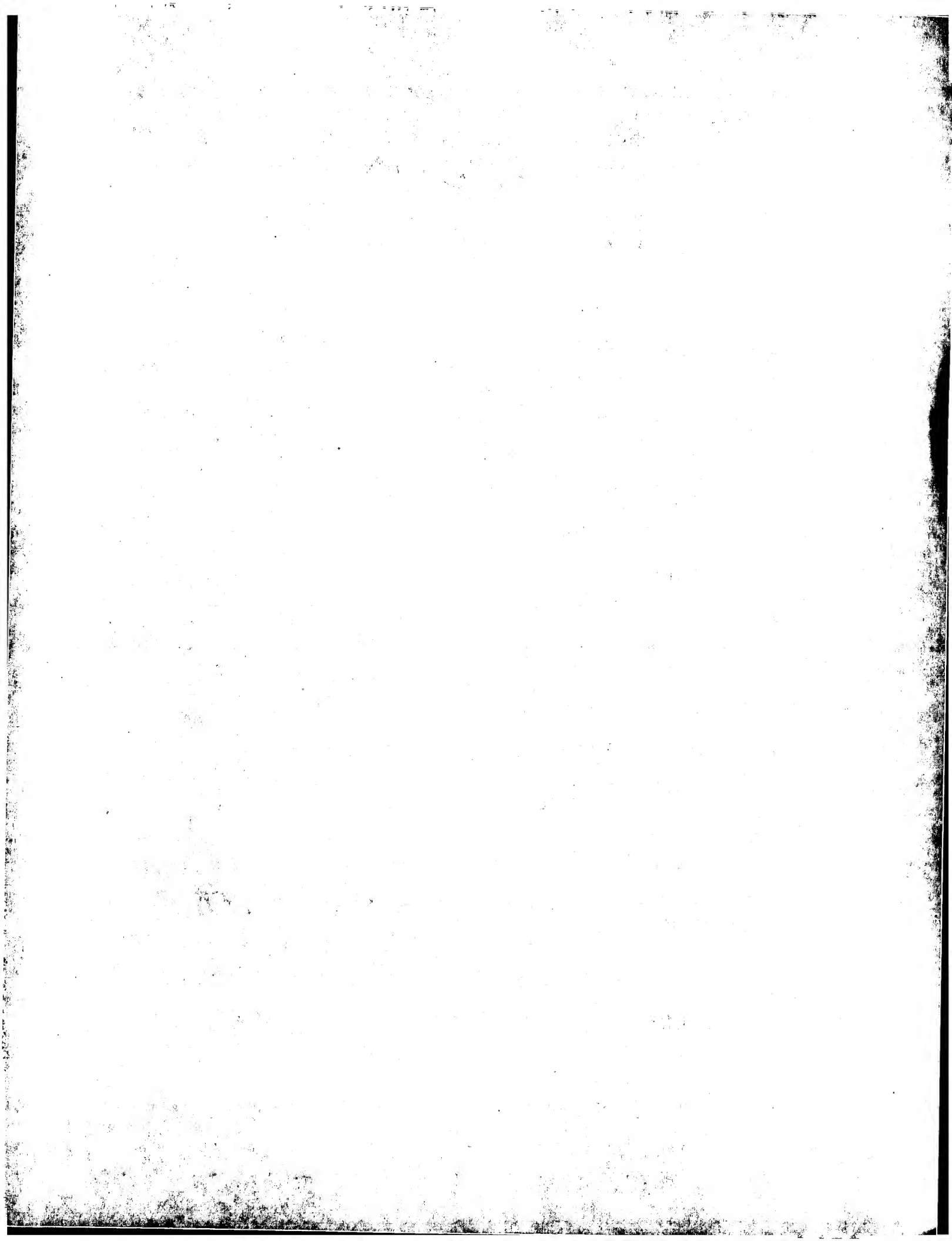
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PATENT SPECIFICATION

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(54) A DEVICE FOR A DRAWING-AWAY AND FEED INSPECTION OF WRAPPING PAPER

(71) We, SKODA, OBOROVY PODNIK, a Czechoslovak Body Corporate of Plzen, Czechoslovakia, do hereby declare the invention for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:—

The invention relates to a device for a drawing-away and feed inspection of a strip of wrapping paper in a machine for connecting cigarettes to filters. If the machine for connecting cigarettes to filters stops, the strip of wrapping paper is pressed to a glue applying roller and to an ironing mechanism; this causes rupture of the paper strip by the continuously revolving glue applying roller and burning of the paper strip by the ironing mechanism. To prevent the paper strip from being damaged, it is necessary that the paper strip be drawn away both from the glue applying roller and ironing mechanism.

Hitherto known devices for drawing away a strip of wrapping paper tend to tighten the paper band moistened by a glue, which may cause its rupture and failure in the machine operation. The tightening of the paper strip is carried out in such a way that the paper strip which is held at one end by a braked supply drum from which it is wound off, and at the other end by the suction of a cutting cylinder, is by means of various mechanisms drawn away from its supply drum and of course from a glue applying roller and ironing mechanism as well; so rupture of the moistened paper caused by an overtightening may occur.

Some of the mentioned drawbacks may be obviated by a device for a drawing-away and feed inspection of a wrapping paper in a machine for connecting cigarettes and filters, which has a four-member joint mechanism with four guide rollers, the first guide roller is situated rotatably on a first pin, fixed to a frame of the machine, and so on the first pin there is also swingably seated one end of a short crank, the free end of which is swingably connected, by means of a second pin, on which a second guide roller

is rotatably seated, to one end of a connecting bar, the other end of which is swingably connected, by means of a third pin, on which a third guide roller is rotatably seated, to the end of the first arm of a two-arm crank and to a free end of a long crank, the other end of which is swingably seated on a fourth pin which is fixed to the frame of the machine, on the fourth pin there is rotatably seated a fourth guide roller, the middle part of the two-arm crank is swingably seated on a fifth pin which is fixed to the frame of the machine and the other end of the other arm of the two-arm crank is connected to an electromagnet armature, one end of a spring is fixed to the second pin, the other end of the spring is fixed to the frame of the machine, and between the first revolving guide and the second revolving guide there is arranged an inspection mechanism for inspecting the feed of a strip of wrapping paper. This inspection mechanism has a weight fixed to an arm, which is swingably seated on a pin of the first revolving guide, and of a limit switch which is fixed in the way of the swinging arm.

The advantage of the device according to the invention consists in a simple design; therefore its production is simple as well; the incidence of problems is decreased so that it nearly does not exist and the machine does not have to be stopped because of the paper strip.

In order that the invention may be clearly understood and readily carried into effect, a preferred embodiment thereof is, by way of example, hereinafter more fully described with reference to the accompanying single figure of the drawing which illustrates diagrammatically a front elevation of the device according to the invention.

A wrapping paper strip 1 is guided from a supply drum 2 by means of a guide and draw roller pair 3 over a first rotatable guide 4, a second rotatable guide 5 and a third rotatable guide 6. Upstream of the first guide 4, which is rotatably seated on a shaft 28, there is arranged an inspection weight 7, which is in a continuous contact with a

tightened portion of the wrapping paper strip 1 and in case of its rupture causes the arm 8, supporting the weight 7, to drop and actuate a switch 9 which stops the machine.

5 The wrapping paper strip 1 is then guided over a first guide roller 10 which is rotatably seated on a first pin 23, over a second guide roller 11 which is rotatably seated on a second pin 24, over a glue applying roller 12, which transmits glue from a glueing mechanism to the strip 1, over a third guide roller 13 which is rotatably seated on a third pin 25, along an ironing mechanism 14 and over a fourth guide roller 15, which is rotatably seated on a fourth pin 26, to a cutting roller 16.

10 If the machine stops, an electromagnet armature 17 is pulled back and a two-arm crank 18, which is seated on a pin 27 and connected to the armature, swings; the other three elements of the articulated mechanism, viz. a short crank 20, a connecting bar 21 and long crank 22, together with the second guide roller 11 and the third guide roller 13, swing as well, after having overcome the tension of a spring 19, one end of which is connected to the second pin 24 of the second guide roller 11 and the other end to the frame of the machine. If both guide rollers 11 and 13 swing, the strip 1 is drawn away from the glue applying roller 12 and also from the ironing mechanism 14, as it is shown in the drawing by a dashed position of the mechanism.

15 When putting the machine into operation again, the electromagnet 17 releases the armature, and by means of tension of the spring 19 the four-arm articulated mechanism 18, 20, 21, 22, together with the guide rollers 11 and 13, returns to the initial position, where the strip of wrapping paper 1 is in contact with the glue applying roller 12 and ironing mechanism 14.

WHAT WE CLAIM IS:—

45 1. A device for a drawing-away and feed inspection of a strip of wrapping paper in a machine for connecting cigarettes to filters

comprising a four-member joint mechanism with four guide rollers, the first guide roller is situated rotatably on the first pin, which is fixed to a frame of the machine, and on which there is also swingably seated one end of a short crank, the free end of which is swingably connected, by means of a second pin on which a second guide roller is rotatably seated, to one end of a connecting bar; the other end of which is swingably connected, by means of a third pin, on which a third guide roller is rotatably seated, to the end of the first arm of a two-arm crank and to a free end of a long crank the other end of which is swingably seated on a fourth pin which is fixed to the frame of the machine and on which there is revolvably seated a fourth guide roller, the middle part of the two-arm crank being swingably seated on a fifth pin which is fixed to the frame of the machine and the other end of the other arm of the two-arm crank is connected to an electromagnet armature, one end of a spring being fixed to the second pin, the other end of the spring being fixed to the frame of the machine, and between a first rotatable guide and a second rotatable guide there is arranged an inspection mechanism for inspecting the feed of the strip of wrapping paper.

2. A device according to Claim 1 wherein an inspection mechanism, arranged between the first guide and the second guide includes a weight fixed to an arm, which is swingably seated on a pin carrying the first guide, and of a limit switch which is fixed in the way of the swingable arm.

3. A device substantially as herein described with reference to the accompanying drawing.

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COMPLETE SPECIFICATION

1 SHEET

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